Output of M-sequence Gen:
B   4861746 · · · ·

Variation Range of Voltage

Fig.1   Output of D/A convertor
(Analog Waveform)
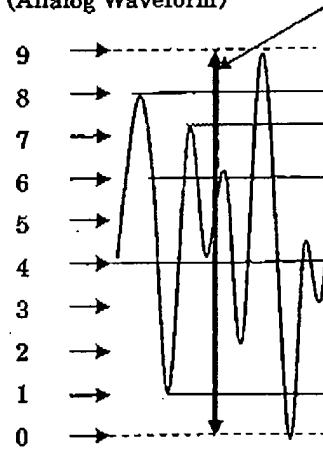
Input of VCO

Fig.2 I/O of VCO

Output of VCO (MHz)

Voltage changes at 1/5 of
frequency of VCO
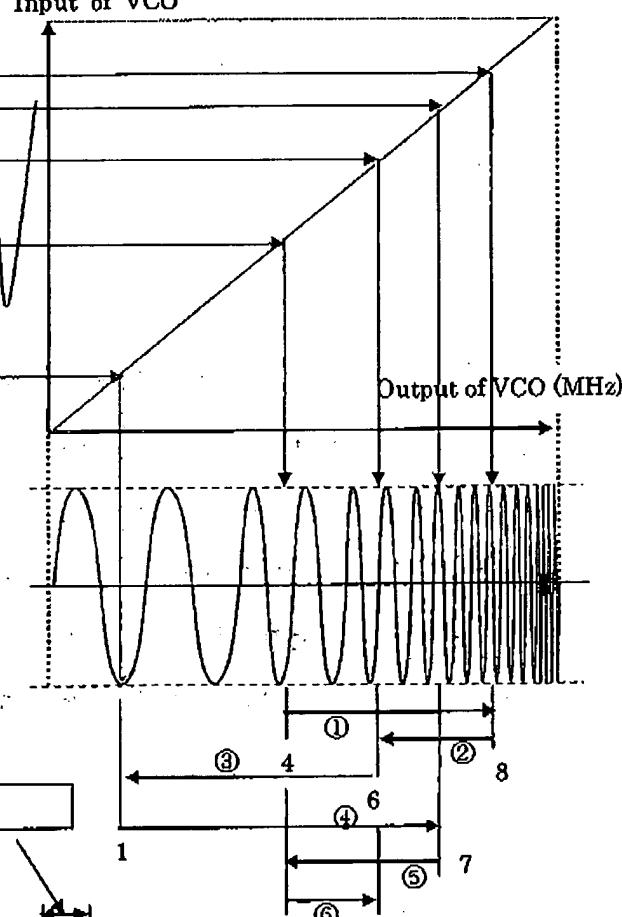
Fig.3 Out freq of VCO

Wave length

①
③ 4   ② 8
④ 6
1   ⑤ 7
⑥

Fig.4 Output waveform of VCO:C

4   ①   8   ②   6   ③   I   ④   7   ⑤   4   ⑥   6

1

0   t

| A | B | C | D |
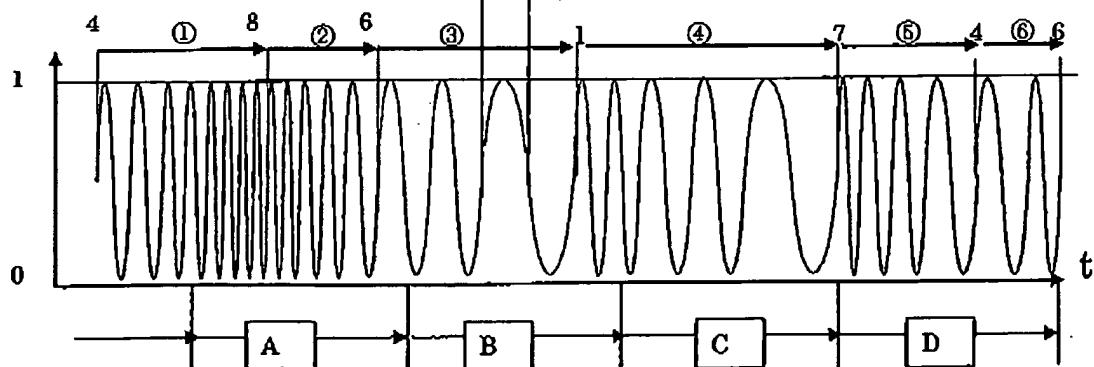
Fig.5 Digital Values by sampling Output of VCO with 1/10 of freq. of VCO

A : 101010101010101010101

21 digits

B : 01010101   C : 0101010   D : 101010101010

8 digits   7 digits   12 digits

Numeral values as sampled are different in number of digits. But, "0" and "1" appears alternatively and "00" or "11" cannot be obtained.

Output of M-sequence Gen:
B 4861746 · · · ·

Input of VCO

Voltage changes at 1/5 of freq of VCO

9
8
7
6
5
4
3
2
1
0

Output of VCO (MHz)

Fig.6   Output of D/A Converter
(Rectangular Waveform)

Pulses

Fig.7 Output waveform of VCO:C

Voltage changes at 1/5 of frequency of VCO.

Frequency between numeric values (input voltage = constant) is constant.
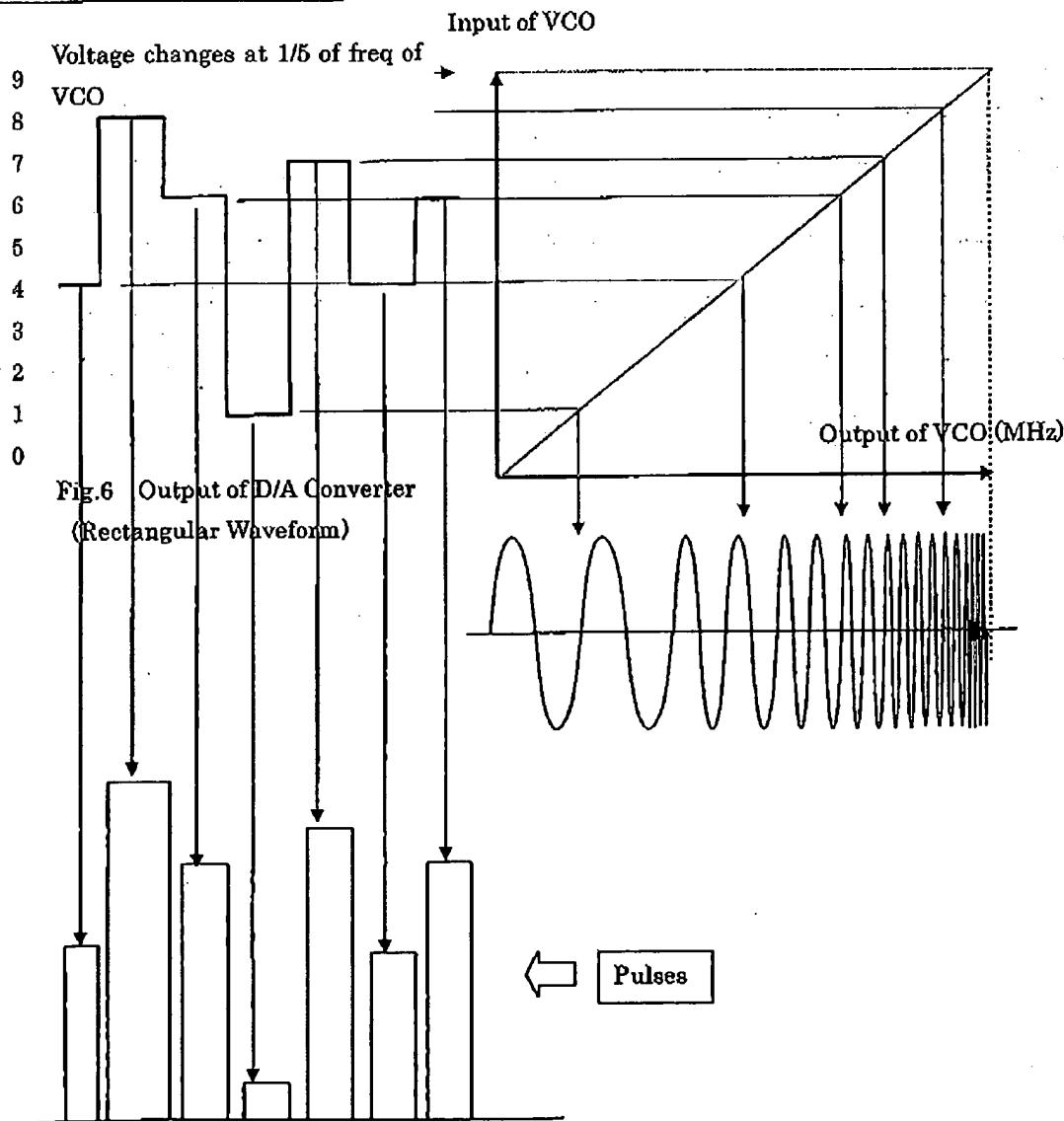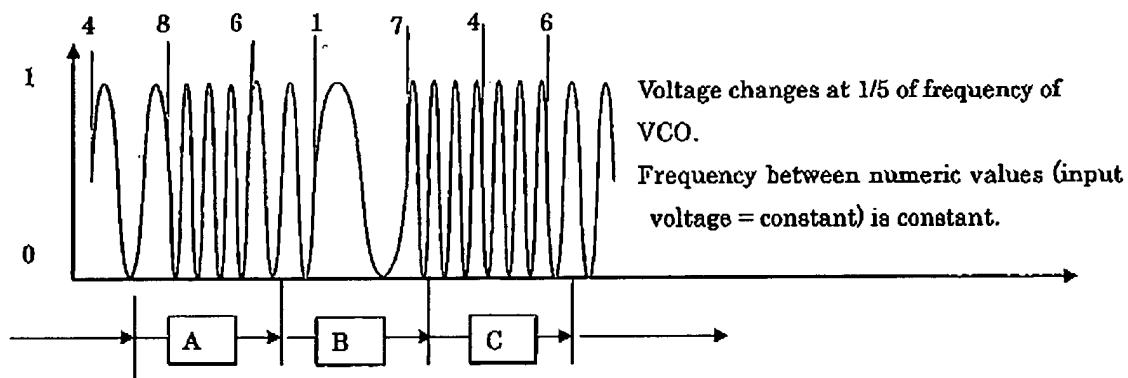
Fig.8 Digital Values by sampling Output of VCO with 1/10 of freq. of VCO:D

A : 1010101010

C : 1010101010101

B : 101010